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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/598,304 | 06/21/2000 | Masafumi Ata | P00.1318 | 7242 |

26263 7590 08/12/2002

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EXAMINER

CHEN, BRET P

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1762

DATE MAILED: 08/12/2002

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/598,304

Applicant(s)
Masafumi Ata et al.

Examiner
Bret Chen

Art Unit
1762



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 3, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-24 is/are pending in the application.
- 4a) Of the above, claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-17 and 19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

Art Unit: 1762

DETAILED ACTION

Claims 1-17 and 19-24 are pending in this application. Amended claims 12, 15, 17, 20-23 and canceled claim 18 are noted. Claims 1-11 have been withdrawn from consideration as being directed to a nonelected invention.

The amendment dated 6/10/02 has been entered and carefully considered. The examiner appreciates the amendments to the specification and claims. In view of said amendment, the objection to the abstract and specification, the 112 rejection, and the previous art rejection have been withdrawn.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 12-17 and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (6,416,820) in view of Banks (4,495,044). Yamada discloses a method of forming a carbonaceous film on a substrate by vapor phase (col.3 lines 40-53). The carbonaceous material can be one or more of a fullerene, a carbon nanotube, graphite, amorphous carbon or a carbene (col.3 lines 56-58). It is the examiner's position that this reads on the use of amorphous carbon and a fullerene. However, the references fails to teach a smooth substrate surface.

Banks discloses diamondlike carbon flakes which are produced by the vacuum arc deposition of carbon on a smooth surface (col.2 lines 15-17). It is well known in the art to

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Art Unit: 1762

deposit carbon films on a smooth carbon surface as noted in Banks. One skilled in the art given the teaching of Banks would realize that the same can be applied to any other process with the expectation of obtaining similar results. Hence, it would have been obvious to utilize a smooth carbon surface as taught in Banks in Yamada's process with the expectation of obtaining similar results.

In claim 14, the applicant requires a specific roughness. It is well settled that determination of optimum values of cause effective variables such as these process parameters is within the skill of one practicing in the art.

In claim 15-17, the applicant requires specific materials. These limitations have been addressed in col.6 of Yamada.

The limitations of claims 21-24 have been addressed above.

Response to Arguments

2. Applicant's arguments with respect to claims 12-17 and 19-24 have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

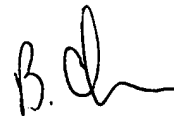
Art Unit: 1762

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bret Chen whose telephone number is (703) 308-3809. The examiner can normally be reached on Monday through Thursday from 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck, can be reached on (703) 308-2333. The fax phone number for this Group is (703) 872-9310. Amendment After Finals should be faxed to (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.



BRET CHEN
PRIMARY EXAMINER

bc
August 11, 2002